Jurnal Teknologi Informasi dan Pendidikan
Volume 18, No. 1, March 2025
https://doi.org/10.24036/jtip.v18i1.951

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id

Influence of Self-Efficacy and Affiliation Motivation on Student Learning Behavior Using Google Gemini

Listi Septiana Avita Putri[1*]✉, Harsono[1]
[1]Faculty of Teacher Training and Education, Universitas Muhammadiyah Surakarta, Sukoharjo, Indonesia
**Corresponding Author: listiavitaputri@gmail.com*

Article Information

Article history:

No. 951
Rec. February 01, 2025
Rev. March 05, 2025
Acc. March 11, 2025
Pub. March 12, 2025
Page. 54 – 66

Keywords:

- *Self-efficacy*
- *Affiliation Motivation*
- *Learning Behavior*

ABSTRACT

The purpose of this study is to analyze the influence of self-efficacy and affiliation motivation, mediated by student learning behavior, in the utilization of artificial intelligence technology, with a particular focus on Google Gemini. This research employed quantitative method with a survey approach, involving students of SMK Batik 2 Surakarta as subjects. A Likert scale ranging from "Strongly Disagree" to "Strongly Agree" (1-4) was utilized to collect the data. Structural Equation Modeling (SEM) and the Significance of Mediation (Sobel Test) were employed to examine the indirect effects. These indirect effects include the influence of self-efficacy, which is mediated by student learning behavior, on the utilization of Google Gemini, and the influence of affiliation motivation mediated by student learning behavior on the use of Google Gemini. The findings of the study demonstrate that self-efficacy and affiliation motivation exert a positive and significant influence on students' learning behavior. Nevertheless, the correlation between self-efficacy, affiliation motivation, and artificial intelligence, such as Google Gemini, is not substantial. This suggests that the utilization of technology is not exclusively contingent on internal factors, such as self-confidence and social motivation.

How to Cite:

Putri, L. S. A., & Harsono, H. (2025). Influence of Self-Efficacy and Affiliation Motivation on Student Learning Behavior Using Google Gemini. Jurnal Teknologi Informasi Dan Pendidikan, 18(1), 54-66. https://doi.org/10.24036/jtip.v18i1.951

This open-access article is distributed under the Creative Commons Attribution-ShareAlike 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. ©2023 by Jurnal Teknologi Informasi dan Pendidikan.

1. INTRODUCTION

Education, according to Law No.20 of 2023, is an effort designed create a learning environment that supports students in developing their potential, including intelligence, morals, and skills needs in the real world. To remain relevant, education must continuously adapt to the changing times and the dynamic demands of society [1]

Various issues arising in education in Indonesia indicate that there are still many shortcomings in the current education system, making technology-based reforms highly necessary [1]. Technology has become an integral part of the modern education system, helping to find and access the latest information more easily and quickly [2]. With careful guidance, everyone engaged will benefit from the appropriate use of technology in the classroom. The world of education is now inseparable from the influence of ever-evolving technology. Artificial intelligence has become an integral component in the world of education, marked by rapid advancements in the field of learning technology [3].

Artificial Intelligence (AI) is one type of technology that is becoming increasingly popular in the field of education. AI is field of computer science that enables machines to perform tasks such as learning and recognition [4]. Artificial Intelligence (AI) is the study of human brain systems, how humans think when giving instructions [5]. Since its introduction by John McCarthy in 1956, AI has evolved into an important tool in education, including in the creation of self-learning systems [6]. Artificial Intelligence can thoroughly analyze student learning data and make learning suggestions tailored to the abilities and interests of the students [7].

Some popular AI applications today include virtual assistants, autocorrect, and chatbots. Chatbot, as an example of intelligent AI technology, can be accessed 24 hours a day and used to support learning. One relevant AI chatbot in education is Google Gemini, which can assist in learning by providing simulations, educational games, and interactive learning experiences. Google Gemini constitutes a multimodal generative artificial intelligence tool, It offers revolutionary technology [8]. Additionally, Google Gemini helps students stay motivated and on the right track by providing real-time support and feedback. Google Gemini's ability to justify its decisions enhances user trust in AI and helps them understand how AI reaches [9].

In this highly advanced digital era, students have ample opportunities to learn independently, with technology as a support. With the presence of AI chatbots, education can more quickly create new and engaging learning methods [10]. The future of relevant and flexible education is highly anticipated, and AI is a crucial factor in achieving it [7]. The learning experience mighty be drastically changed by integrating AI into educational environments, thereby empowering both students and educators [11]. Individuals who consistently have a positive perception of benefits of technology have positive experience with e-learning methods [12].

Self-efficacy in students should also be encouraged as a positive effort and stimulus to drive their potential and strengths to achieve their goals [13]. Building self-efficacy in learning, such as planning study strategies, fostering curiosity, and independently evaluating knowledge, becomes very important [14]. Affiliative motivation also plays an important role in helping students effectively utilize AI by encouraging collaboration and knowledge sharing, thereby enhancing their interpersonal skills and academic achievements [15]. By harnessing the power of AI, Google Gemini can offer a personalized and engaging learning experience that helps users understand and retain it [16].

The integration of artificial intelligence (AI) within educational institutions holds the promise of enhancing pedagogical effectiveness and fostering heightened student engagement. Furthermore, AI can be utilized by students in a more personalized and effective manner [17]. Researchers [18] have shown that affiliation motivation can influence human interactions with AI, with lonely individuals being more likely to interact with AI chatbots and express their feelings to these chatbots. For students, interest in learning and discipline are the keys to boosting their motivation to learn [19].

The level of an individual's confidence in using technology such as chatbots will affect the extent to which they can leverage AI to enhance learning. So that students exhibit various behaviors, some are diligent, obedient, and some are politely [20]. Learning behavior can be influenced by motivation, where high-quality motivation will have a positive impact on well-being, while low-quality motivation can be detrimental to well-being [21]. If someone actively interacts with their environment, they can change their knowledge, experiences, skill, values, and attitudes [22]. Students with high self-efficacy will be more motivated to use Google Gemini to support their learning process.

The underlying philosophy of this study centers on the ideas of attachment motivation and self-efficacy, which significantly influence students' learning behaviors in utilizing Artificial Intelligence (AI) technologies such as Google Gemini. [23] asserts that a person's conviction in their capacity to finish a task is known as self-efficacy. A high level of self-efficacy has been demonstrated to enhance a student's learning motivation, thereby increasing their confidence in overcoming learning challenges. Self-efficacy in the context of technology refers to a person's confidence in their technological proficiency. [24] show that the efficacy of technology has been demonstrated to exert a substantial influence on the satisfaction of students in e-learning platforms. As posited by McCelland, affiliation motivation defined as an individual's desire to engage in interpersonal interactions and establish interpersonal relationships exerts a substantial influence on the encouragement of collaborative methods of learning.

The main issue faced in this research is the lack of understanding of how self-efficacy and affiliation motivation influence student's learning behaviors, as well as how these two variables affect the use of technology such as Google Gemini. Some students may have high self-efficacy but do not optimally utilize technology, while affiliation motivation can strengthen social interactions but is not enough to encourage the use of AI in learning. To

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id

address this issue, the research solution focuses on an in-depth analysis of the influence of these two variables, with the aim of understanding how appropriate strategies can applied to maximize the use of AI like Google Gemini in the process of teaching and learning, thereby enhancing the effectiveness and interactivity of learning for students.

The study's goal is to carry out an exhaustive analysis of the effects of self-efficacy and affiliation motivation on students' learning behavior and how this affects the use of Google Gemini as an Artificial Intelligence (AI)- based learning tool. This study is conducted to understand the extent to which students' confidence in their own abilities (self-efficacy) contributes to improving learning behavior and whether the motivation for social interaction (affiliation motivation) also influences how students learn and how AI is used in the classroom. Additionally, the purpose of this study is to examine how good learning behavior and the effectiveness of using AI tools like Google Gemini in supporting interactive and engaging learning. With this research, it is hoped that it can provide guidance for educators in designing teaching strategies that maximize student's potential through the use of modern technology such as AI.

2. RESEARCH METHOD

The study's used a quantitative methodology to examine the connections between self-efficacy, affiliation motivation, student learning behavior, and the use of artificial intelligence technology, specifically Google Gemini. The quantitative approach was chosen because it allows for systematic analysis of numerical data to answer research questions with a high level of accuracy.

2.1. Research Design and Population

This study employs a quantitative survey design with data collection through structured questionnaires. The research population consists of students from SMK Batik 2 Surakarta, chosen because this educational environment is relevant to the research objectives, namely utilizing AI technology in learning. [25] The sample was taken using the stratified random sampling method to ensure that each subgroup within the population is proportionally represented based on the predetermined strata, such as grade level or major.

Jurnal Teknologi Informasi dan Pendidikan
Volume 18, No. 1, March 2025
https://doi.org/10.24036/jtip.v18i1.951

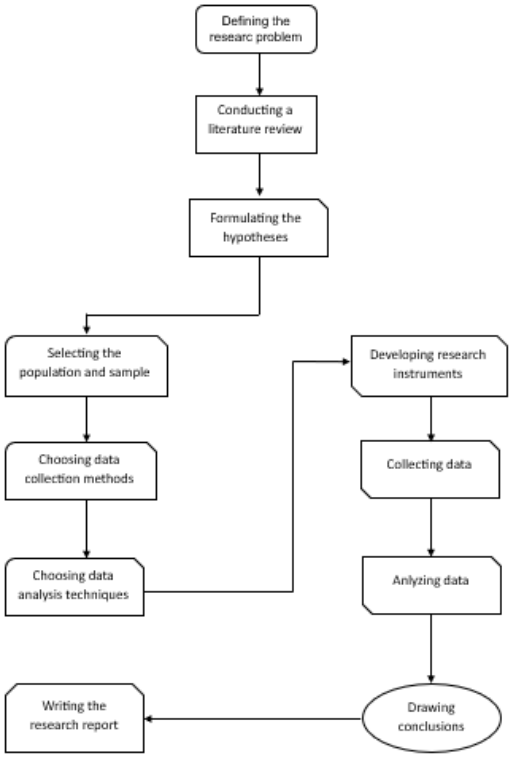

Figure 1. Research Flowchart

2.2. Data Collection Instrument

The main tool used in this research is a questionnaire with a four-point Likert scale, which is defined as follows:

a) 1 = Strongly Disagree (SD)
b) 2 = Disagree (D)
c) 3 = Agree (A)
d) 4 = Strongly Agree (SA)

The questionnaire is designed to measure the variables of self-efficacy, affiliation motivation, student learning behavior, and the use of Google Gemini. The validity of the instrument was tested through construct validity analysis using Confirmatory Factor Analysis (CFA), whereas the Cronbach's Alpha coefficient was used to gauge its dependability [26].

2.3. Data Collection and Analysis

Questionnaires were given to chosen respondents in order to directly gather data. Structural Equation Modeling (SEM) with AMOS software was used to analyze the data and determine the direct and indirect correlations between variables. Additionally, the Sobel test

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id

was used to gauge how important the mediating role of students' learning behavior was [27] about the connection between self-efficacy and affiliation motivation with the use oof Google Gemini.

2.4. Research Variables

This study includes four main variables, namely:

1) Self-Efficacy (X1): Students' belief in their ability to complete academic tasks.
2) Affiliation Motivation (X2): The students' drive to interact and build social relationships
3) Student Learning Behavior (X3): The patterns of students' habits in managing time, completing tasks, and facing learning challenges [28].
4) The use of Google Gemini (Y): The frequency and manner in which students utilize Google Gemini as learning support tool.

2.5. Research Procedure

1) Preparation: The researcher prepares the questionnaire instrument, tests its validity and reliability, and obtains research permission from the school authorities.
2) Data Collection: The questionnaire was disseminated to respondents in both face-to-face and online formats, ensuring voluntary participation.
3) Data Analysis: Data were analyzed using SEM to test hypotheses and evaluate the model of relationships between variables. The Sobel test is used to ensure the strength of the mediation of students' learning behavior.

This method is designed to provide valid and reliable result in answering research question related to the impact of self-efficacy and affiliation motivation on students' learning behavior and the use of AI-based technology.

3. RESULTS AND DISCUSSION

Based on the result of the analysis of the Based on the result of the analysis of the relationship between variables using the Structural Equation Modeling (SEM) method and the Significance of Mediation (Sobel Test), several significant and non-significant relationships between the self-efficacy variables were found, affiliation motivation, student learning behavior, and the use of Google Gemini. Here are the detailed test result:

Table 1. Regression Weight Result

			Estimate	S.E.	C.R.	P	Label
SLB	<---	SE	,210	,087	2,417	,016	par_33
SLB	<---	AM	,449	,132	3,410	***	par_34

			Estimate	S.E.	C.R.	P	Label
GG	<---	SE	-,032	,138	-,235	,814	par_31
GG	<---	AM	,242	,195	1,242	,214	par_32
GG	<---	SLB	,365	,253	1,441	,149	par_35
X1.1	<---	SE	1,000				
X1.2	<---	SE	,886	,155	5,727	***	par_1
X1.3	<---	SE	1,371	,143	9,574	***	par_2
X1.4	<---	SE	1,483	,180	8,264	***	par_3
X1.5	<---	SE	1,112	,179	6,219	***	par_4
X1.6	<---	SE	,951	,166	5,735	***	par_5
X1.7	<---	SE	1,006	,158	6,358	***	par_6
X1.8	<---	SE	,916	,142	6,466	***	par_7
X1.9	<---	SE	1,213	,176	6,891	***	par_8
X2.9	<---	AM	1,000				
X2.8	<---	AM	1,202	,229	5,261	***	par_9
X2.7	<---	AM	,973	,223	4,369	***	par_10
X2.6	<---	AM	1,352	,246	5,500	***	par_11
X2.5	<---	AM	1,085	,225	4,833	***	par_12
X2.4	<---	AM	1,051	,210	4,995	***	par_13
X2.3	<---	AM	1,185	,223	5,306	***	par_14
X2.2	<---	AM	1,042	,212	4,919	***	par_15
X2.1	<---	AM	1,185	,204	5,815	***	par_16
X3.9	<---	SLB	1,000				
X3.8	<---	SLB	1,226	,296	4,148	***	par_17
X3.7	<---	SLB	1,246	,309	4,025	***	par_18
X3.6	<---	SLB	1,300	,309	4,204	***	par_19
X3.5	<---	SLB	1,171	,281	4,163	***	par_20
X3.4	<---	SLB	1,388	,301	4,609	***	par_21

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id

			Estimate	S.E.	C.R.	P	Label
X3.3	<---	SLB	1,660	,352	4,721	***	par_22
X3.2	<---	SLB	1,205	,294	4,102	***	par_23
X3.1	<---	SLB	1,894	,373	5,084	***	par_24
Y1	<---	GG	1,000				
Y2	<---	GG	,978	,198	4,927	***	par_25
Y3	<---	GG	,798	,177	4,501	***	par_26
Y4	<---	GG	,944	,160	5,890	***	par_27
Y5	<---	GG	,851	,200	4,265	***	par_28
Y6	<---	GG	,933	,171	5,448	***	par_29
Y7	<---	GG	,777	,160	4,862	***	par_30

3.1. Self-Efficacy on Student Learning Behavior

Table 2. Direct Hypothesis

Hypothesis				B	S.E.	C.R.	P	Conclusion
H1	SLB	<---	SE	,210	,087	2,417	,016	Positive, significant

The results show that Self-Efficacy has a positive and significant effect on Student Learning Behavior with a path coefficient of 0.210 and a p-value of 0.016. This means that the higher the level or students self-confidence in their ability to complete academic tasks, the better their learning behavior. High self-confidence makes students more motivated to strive in the learning process, thereby contributing to the improvement of positive learning behaviors, such as spending more time studying, the ability to manage study time well, and persistence in facing learning challenges.

3.2. Affiliative Motivation toward Student Learning Behavior

Table 3. Direct Hypothesis

Hypothesis				B	S.E.	C.R.	P	Conclusion
H2	SLB	<---	AM	,449	,132	3,410	0	Positive, significant

Affiliative Motivation also has a positive and significant effect on Student Learning Behavior with a path coefficient of 0.449 and a p-value <0.001. This result states that the

drive to interact with others and build social relationships plays an important role in a student's learning behavior. Affiliation motivation directs students to become more involved in group activities, discuss with friends, and seek help when facing learning difficulties. Students with high affiliation motivation tend to utilize social support from classmates or teachers, which will later influence their learning behavior.

3.3. Self-Efficacy towards the Use Google Gemini

Table 4. Direct Hypothesis

Hypothesis				B	S.E.	C.R.	P	Conclusion
H3	GG	<---	SE	-0,032	,138	-0,235	,814	Negative, insignificant

The relationship between Self-Efficacy is negative and not significant, with a path coefficient of -0.032 and a p-value of 0.814. It means that the level of students confidence in their ability to complete academic tasks does nit directly affect how often or how well they use AI technology like Google Gemini. Students with high self-confidence are likely to rely more on their personal abilities to complete tasks and do not depend too much on supporting technological tools.

3.4. Affiliative Motivation towards the Use Google Gemini

Table 5. Direct Hypothesis

Hypothesis				B	S.E.	C.R.	P	Conclusion
H4	GG	<---	AM	,242	,195	1,242	,214	Positive, insignificant

The influence of Affiliative Motivation on the Use of Google Gemini is positive but not significant, with a path coefficient of 0.242 and a p-value of 0.214. This shows that although the urge to collaborate with others and participate in social interactions can influence the use of technology like Google Gemini, this influence is not strong enough to be significant. Students who are more socially motivated feel that artificial intelligence like Google Gemini does not directly support their need to interact face-to-face with friends or their social environment.

3.5. Student Learning Behavior towards the Use of Google Gemini

Table 6. Direct Hypothesis

Hypothesis				B	S.E.	C.R.	P	Conclusion
H5	GG	<---	SLB	,365	,253	1,441	,149	Positive, insignificant

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id

Student Learning Behavior has a positive but not significant influence of 0.365 and a p-value of 0.149. Although there is a tendency that good learning behavior can encourage the use of technology like Google Gemini, these results indicate that the factor is not strong enough to have a significant impact. This could indicate that although students have positive learning behaviors, they may not feel the need or be accustomed to using Google Gemini as part of their learning process. The use of technology often involves other variables, such as ease of access, relevance to learning needs, or support from teachers and institutions.

3.6. The Influence of Self-Efficacy on the Use of Google Gemini through Student Learning Behavior

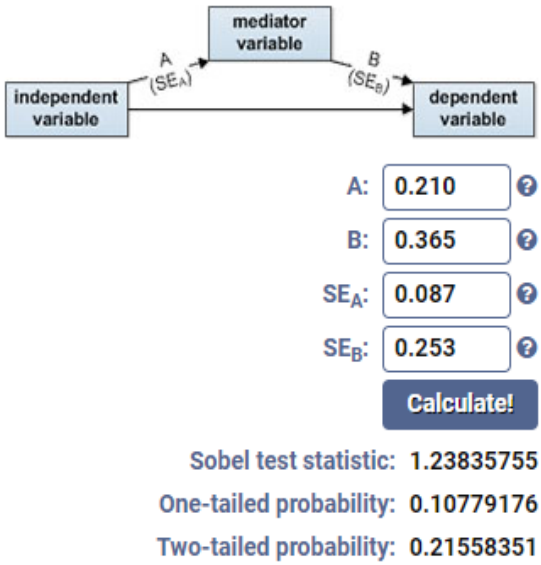

Figure 2. Sobel Test

In figure 2, the indirect effect of Self-Efficacy on the Use of Google Gemini through Student Learning Behavior shows an insignificant result with a t-statistic of 1.23 and a p-value of 0.215. This means that students learning behavior does not significantly mediate between Self-Efficacy and the use of Google Gemini. Although students with high Self-efficacy may exhibit good learning behavior, this behavior is not sufficient to significantly influence the use of Google Gemini.

Jurnal Teknologi Informasi dan Pendidikan
Volume 18, No. 1, March 2025
https://doi.org/10.24036/jtip.v18i1.951

3.7. The Influence of Affiliation Motivation on the Use of Google Gemini through Student Learning Behavior

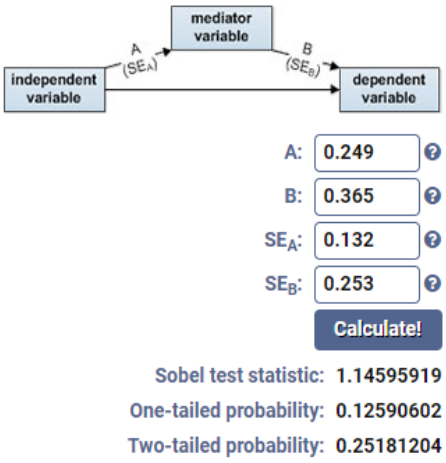

Figure 3. Sobel Test

Figure 3. The results of this test indicate that the Influence of Affiliation Motivation on the Use of Google Gemini through Student Learning Behavior is also not significant, with a t-statistic of 1.14 and a p-value of 0.252. Although motivation can affect learning behavior, this behavior is not strong enough to significantly mediate the use of Google Gemini. These results reflect the complexity of technology use in the educational context, where factors such a availability, ease of use, and students perceptions of the benefits of the technology may be determining.

4. CONCLUSION

This research underscores that Self-Efficacy and Affiliation Motivation have been proven to significantly influence Student Learning Behavior, supporting the important role of self-confidence and social motivation in the formation of learning habits. However, when faced with the use of artificial technology such as Google Gemini, these two variables do not have a significant direct influence.

The use of Google Gemini is not strongly affected by Self-Efficacy, Affiliation Motivation, or even Student Learning Behavior. This research offers a broader perspective on the relationship between motivation, learning behavior, and technology use in education. Simply motivating students socially or enhancing their confidence in learning may not be sufficient without ensuring that technology is accessible and relevant. Therefore,

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id

future research should explore other factors that drive students' adoption of educational technology.

REFERENCES

[1] Nabila, "Jurnal Pendidikan Indonesia," pp. 867–875, 2021.
[2] Ana Maritsa, "Pengaruh Teknologi Dalam Dunia Pendidikan," vol. 18, no. 2, pp. 91–100, 2021, doi: 10.46781/al-mutharahah.v18i2.303.
[3] A. C. Dewanto, "Risiko dan mitigasi penggunaan kecerdasan buatan dalam bidang pendidikan," vol. 4, no. 2018, pp. 1–10, 2023.
[4] T. S. Peniarsih, Iswandir, "3 1 1,2".
[5] T. Khairunisa, "Implementation of AI Chatbot as an Interactive Learning Medium on Accounting Lessons in SMK," vol. 9, no. 3, pp. 1414–1420, 2024.
[6] P. Ayuningtyas and H. Oktafiandi, "Chatbot AI Platform Sebagai Media Peningkatan Kemampuan Belajar Siswa," vol. 12, no. 1, pp. 1–6, 2024.
[7] F. Y. Liriwati, "Transformasi Kurikulum ; Kecerdasan Buatan Untuk Membangun Pendidikan Yang Relevan di Masa Depan," vol. 1, pp. 62–71, 2023.
[8] M. Imran and N. Almusharraf, "Google Gemini as a next generation AI educational tool : a review of emerging educational technology," *Smart Learn. Environ.*, 2024, doi: 10.1186/s40561-024-00310-z.
[9] T. R. Mcintosh, T. Susnjak, T. Liu, P. Watters, S. Member, and M. N. Halgamuge, "From Google Gemini to OpenAI Q * (Q-Star): A Survey of Reshaping the Generative Artificial," vol. 1, no. 1, pp. 1–30, 2023.
[10] I. K. Sari, "Jurnal basicedu," vol. 5, no. 4, pp. 2156–2163, 2021.
[11] P. Perera and M. Lankathilake, "Preparing to Revolutionize Education with the Multi-Model GenAI Tool Google Gemini ? A Journey towards Effective Policy Making," vol. 2665, pp. 246–253, 2023, doi: 10.36348/jaep.2023.v07i08.001.
[12] M. S. A. Latip, I. Noh, M. Tamrin, and S. N. N. A. Latip, "Students' Acceptance for e-Learning and the Effects of Self-Efficacy in Malaysia," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 10, no. 5, pp. 658–674, 2020, doi: 10.6007/ijarbss/v10-i5/7239.
[13] S. Nurdin, A. Weski, and Y. Rahayu, "Efikasi Diri dan Motivasi Dalam Upaya Meningkatkan Kinerja Karyawan Pemasaran," vol. 2, no. 1, pp. 85–96, 2020.
[14] V. Miranda, "Self-Efficiency And Achievement Motivation On Student Learning Independence," vol. 2663.
[15] B. Steinmann, S. K. Ötting, and G. W. Maier, "Need for Affiliation as a Motivational Add-On for Leadership Behaviors and Managerial Success," vol. 7, no. December, pp. 1–18, 2016, doi: 10.3389/fpsyg.2016.01972.
[16] T. J. Lee, D. J. Campbell, S. Patel, A. Hossain, N. Radfar, and E. Siddiqui, "Unlocking Health Literacy : The Ultimate Guide to Hypertension Education from ChatGPT vs . Google Gemini," pp. 2–7, doi: 10.7759/cureus.Unlocking.
[17] M. Rizki, F. Rafael, R. Irawan, C. Huda, and Y. Mahardika, "Tantangan Teknologi Artificial Intelligence pada Kegiatan Pembelajaran Mahasiswa," vol. 2, no. 1, pp. 379–384, 2024.
[18] J. Crawford *et al.*, "Studies in Higher Education When artificial intelligence substitutes humans in higher education : the cost of loneliness , student success , and retention," *Stud. High. Educ.*,

pp. 1–15, 2024, doi: 10.1080/03075079.2024.2326956.
[19] T. Heri, "Meningkatkan motivasi minat belajar siswa," vol. 15, no. 1, pp. 59–79, 2019.
[20] R. Suryadi, "The Analysis Of Students ' Learning Behavior In," vol. 02, no. 01, pp. 22–27, 2020.
[21] W. Nuryono, "Jurnal Inspirasi Pendidikan Selama Pandemi Covid-19 : A Structural Equation Model," vol. 12, no. 1, pp. 40–47, 2022.
[22] D. Agustiah, "Dampak Penggunaan Media Sosial Terhadap Perilaku Belajar Siswa," vol. 4, no. 2, pp. 181–190, 2020, doi: 10.29240/JBK.V4I2.1935.
[23] A. Bandura, "Bandura 1977.pdf."
[24] H. Jiang, A. Y. M. A. Islam, X. Gu, J. M. Spector, and S. Chen, "Technology-Enabled E-Learning Platforms in Chinese Higher Education During the Pandemic Age of COVID-19," *SAGE Open*, vol. 12, no. 2, 2022, doi: 10.1177/21582440221095085.
[25] Asrulla, Risnita, M. S. Jailani, and F. Jeka, "Populasi dan Sampling (Kuantitatif), Serta Pemilihan Informan Kunci (Kualitatif) dalam Pendekatan Praktis," *J. Pendidik. Tambusai*, vol. 7, no. 3, pp. 26320–26332, 2023.
[26] Y. A. Muskar and Y. S. Rosyad, "Validitas Dan Reliabilitas Depression Anxiety Stress Scale For Youth (DASS-Y) Versi Bahasa Indonesia," *Inf. dan Promosi Kesehat.*, vol. 3, no. 1, pp. 23–29, 2024, doi: 10.58439/ipk.v3i1.215.
[27] R. Agustiningsih, A. Dardiri, and S. P. Suardiman, "Kemampuan Guru Taman Kanak-kanak di Era Digital," vol. 13, no. 2, pp. 239–249, 2024.
[28] M. Sinaga, "Prosiding Seminar Nasional Keguruan dan Pendidikan E-ISSN: xxxx-xxxx Peran dan Tantangan Penggunaan AI (Artificial Intelligence) Dalam Pembelajaran Matematika The Role and Challenges of Using AI (Artificial Intelligence) in Mathematics Learning," no. 1, p. 2024, 2024, [Online]. Available: https://ejournal.ummuba.ac.id/index.php/SNKP/hm.

P.ISSN: 2086 – 4981
E.ISSN: 2620 – 6390
tip.ppj.unp.ac.id